

CPP 程式設計題

命題者：TCC

題目名稱(中文/英文)：AbsoluteValue

主要測試觀念： templates

Basics

- ☐ C++ BASICS 1
- ☐ FLOW OF CONTROL
- ☐ FUNCTION BASICS
- ☐ PARAMETERS AND OVERLOADING
- ☐ ARRAYS
- ☐ STRUCTURES AND CLASSES
- ☐ CONSTRUCTORS AND OTHER TOOLS
- ☐ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES
- ☐ STRINGS
- ☐ POINTERS AND DYNAMIC ARRAYS

Functions

- ☐ SEPARATE COMPILATION AND NAMESPACES
- ☐ STREAMS AND FILE I/O
- ☐ RECURSION
- ☐ INHERITANCE
- ☐ POLYMORPHISM AND VIRTUAL FUNCTIONS
- ☒ TEMPLATES
- ☐ LINKED DATA STRUCTURES
- ☐ EXCEPTION HANDLING
- ☐ STANDARD TEMPLATE LIBRARY
- ☐ PATTERNS AND UML

題目說明： Write template-based function that calculates and returns the absolute value of two numeric values passed in. Note that the function should operate with any numeric data type(e.g., float, int, double, char).

Please use the code snippets in the following to test your program:

```
int main()
{
    // Variable declarations
    int i1, i2;
    double d1, d2;

    i1 = 10; i2=20;
    cout << "Absolute value of 10,20 is " << absoluteValue(i1,i2) << endl;

    d1 = 5.5; d2=3.1;
    cout << "Absolute value of 5.5, 3.1 is " << absoluteValue(d1,d2) << endl;

    return 0;
}
```

輸入說明： 此題無輸入。會提供測試用的 main()。

輸出說明： 參考範例。

I/O 範例：

	Sample Input	Sample Output
第一組測資與輸出	input-main1.cpp	output1.txt

附屬資料：

☒解答程式：absolute.cpp

☒測試資料：input-main1.cpp, output1.txt, input-main2.cpp, output2.txt

☒ 易，僅需用到基礎程式設計語法與結構

☐ 中，需用到多項程式設計語法與結構

☐ 難，需用到多項程式結構或較為複雜之資料型態或結構

解題時間：30 分鐘。

其他註記：